

**BUILDING TRADES PROGRAM
PROGRAM REVIEW REPORT**
Prepared: Spring 2017

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Executive Summary

Program Description Summary

Sitting Bull College offers an Associate of Applied Science in Building Trades an Interior Construction, Exterior Construction Certificate in Building Trades which will provide students with the instruction and skills required for entry-level carpenters and remodeling of residential or other light –framed buildings. The Building Trades program was developed in 1997 with the idea that our Building Trades students would be provided with the opportunity to gain self-worth by learning a trade and giving back to the community through construction projects and actively participating in the Sitting Bull College Building Trades program. The success of the program led to the development of the Sitting Bull College Construction Company which employs Building Trades students and graduates. The Building Trades Program and the construction company both instill pride and a sense of accomplishment for the students and employees by providing residential housing and renovations for the communities of Standing Rock. At present, there are two faculty: Dave Luger, and Terry Brownotter.

Since 1997, enrollment in Building Trades has remained steady with an average of eight students per semester. Retention is poor, at best, as many of our students receive some training then return to the work force (66 at last count). Most of our students are employed throughout Standing Rock with six that I know of starting their own construction companies.

The program follows the National Center for Construction Education and Research (NCCER) guidelines for curricula and testing. Funding for most of our program needs is self generated through our construction company revenue.

The Building Trades advisory board consists of local contractors and educators who meet twice a year to provide recommendations for improvements.

Role of Program within Sitting Bull College

Mission statement as stated in the Sitting Bull College Bulletin:

Construction, as in many other occupations, is becoming a field of specialists.

SBC's Building trades Program follows curriculum guidelines set forth by the Associated General Contractors of America and the National Center for Construction and Education Research (NCCER).

This program will provide students with the instruction and skills required for entry-level carpenters and remodeling of residential or other light-framed buildings. Coupled with "hands-on" experience work at off-campus construction sites, the curriculums provide the necessary theory as well as instruction in blueprint reading, estimating, safety and the use of newly developed equipment and materials. Extensive experience is gained in building layout, framing, sheathing, roofing, exterior and interior finishing.

Students who successfully complete the program leave with a solid foundation as entry-level carpenters. Jobs that await them are many as demand is high for motivated individuals locally and elsewhere with building contractors, lumber yards and maintenance shops.

The courses provided to meet Sitting Bull College requirements for Associate of Applied Science Degree and Certificates are provided in the college bulletin and include:

ARCH 101 Architectural Drafting	CARP 145 Construction Practicum II
ARCH 144 Construction Estimating	CARP 160 Concrete Systems Technology
CARP 102 Core Curriculum	CARP 222 Construction Safety
CARP 105 Construction Math	CARP 240 Advanced Interior Finishing
CARP 120 Principles of Framing	CARP 245 Construction Practicum III
CARP 125 Construction Practicum I	CARP 255 Construction Practicum IV
CARP 140 Principles of Interior Finish	

Program Personnel

At present, the faculty consists of two:

Dave Luger, Building Trades Instructor, Full-Time

BS-Education

CTE License in Building Trades

NCCER Certificate

Terry Brownnotter, Building Trades Instructor, Full-Time

AAS-Building Trades

Teacher Certificate Program

CTE Licenses in Building Trades

NCCER Certificate

Construction Inspection Certificate-Falmouth Institute

In 2012 the program had a single instructor, in 2013 a second instructor was added with the start of the TREND program in 2012 with a grant from the Department of Labor to develop a impact on the building trades program. TREND has helped to purchase equipment and provide for faculty development.

Program Productivity

Enrollment in Building Trades for the reporting period (Fall 2011-Fall 2016) remains steady with a average of eight students per semester. During that time all students were enrolled in the two year Associate of Applied Science (A.A.S.) degree plan. If we look at graduation as a measure of success, it is slight, as only five have graduated with A.A.S. degrees during the reporting period. Retention is poor.

The big picture is that many of our students after a year in school have found confidence in their abilities as carpenters (and a need to provide for their families) have joined the work force either with construction companies, maintenance jobs or by starting their own business. With TREND recommending certificates. Building Trades has advised students to transition from certificates to Associated Science degrees for a better understanding and experience in construction field.

Twenty seven students are reported to be employed in related construction trades. All but six have transited to associated science degree program. Due to these assessment finding all incoming freshman are now enrolled in the certificate plan.

Male/Female enrollment in the program has more males than females. The program had 2 females that started the program and one female that graduated. The age of the male students range from 18-35.

Enrollment by Degree Plan

	FA 11	SP 12	FA 12	SP 13	FA 13	SP 14	FA 14	SP 15	FA 15	SP 16	FA 16	SP 17
A.A.S. Building Trades	3	6	8	11	5	8	6	8	10	7	8	5
Framing Certificate	N/A	N/A	N/A	N/A	1	1	4	0	6	0	4	0
Interior Certificate	N/A	N/A	N/A	N/A				0		2		0
9 month Certificate Building Trades	5	3	0	0	0	2	1	0	N/A			
Total	3	6	8	11	6	11	11	8	16	9	12	5

Program Retention rate

	FA 15-16	FA 14-15	FA 13-14	FA 12-13
Building Trades	56%	57%	40%	25%
Framing	17%	50%	0%	0%
Interior	0%	0%	0%	0%

Graduates by Degree Plan

Graduates	11-12	12-13	13-14	14-15	15-16
A.A.S. Building Trades	3	2	0	1	2
Framing Certificate	N/A	N/A	N/A	2	2
Interior Construction Certificate	N/A	N/A	N/A	1	2
9 month Certificate Building Trades	0	3	1	N/A	N/A
Total	3	0	1	4	4

All Building Trades Graduates in the work Force Last five years

	Self-Employed	Working for others	Unknown	
Graduates	3	5	4	

Program Revenue

The North Dakota State Vocational and Technology Education Department also helps with salaries and gives the Department a small \$1,000-\$2,000 grant each year for equipment or tools.

The dollars generated by the Building Trades Construction Company is the programs main source of revenue.

TREND also made funds available for one instructor and equipment.

	Fall ISC	Spring ISC	Tuition	Total
2011-2012	\$ 29,269	\$ 28,561	\$ 30,975	\$ 88,805
2012-2013	\$ 24,219	\$ 34,759	\$ 34,385	\$ 93,363
2013-2014	\$ 17,940	\$ 33,861.75	\$ 28,625	\$ 80,426.75
2014-2015	\$ 49,780.83	\$ 26,214.38	\$ 36,435	\$ 112,430.21
2015-2016	\$ 59,062.41	\$ 18,194.58	\$ 38,648.40	\$ 115,905.39

Program Budget

Construction dollars are used for supplies, tools and equipment and tool repairs. Construction dollars were also used to furnish tools and equipment in our Trades Center. TREND also has contributed funds for tools and equipment. Construction dollars are also used for any additional personnel and/or subcontractors needed to complete tasks assigned to us.

Building Trades						
Five Year Expenditure Report						
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	Total
Salary	\$ 51,530.00	\$ 86,360.00	\$ 86,360.00	\$ 88,360.00	\$ 90,360.00	\$ 402,970.00
Fringe Benefits	\$ 12,882.50	\$ 21,590.00	\$ 21,590.00	\$ 22,090.00	\$ 22,590.00	\$ 100,742.50
Supplies-CTE			\$ 6,060.00	\$ 6,162.00	\$ 9,635.00	\$ 21,857.00
Supplies - Trend			\$ 52,209	\$ 2,900	\$ 25,239	\$ 80,348
Travel -State CTE		\$ 716.00				\$ 716.00
Travel - Trend			\$ 472	\$ 3652	\$ 2389	\$ 6,513
Equipment-Trend			\$ -	\$ 13,500	\$ 37,900	\$ 51,400
Total	\$ 64,412.50	\$ 108,666.00	\$ 166,691.00	\$ 136,664.00	\$ 188,113.00	\$ 664,546.50
Construction Company	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	
Revenue	\$ 549,836.00	\$ 404,533.00	\$ 144,332.50	\$ 359,154.41	\$ 267,475.48	\$ 1,725,331.39
Expenses	\$ 546,015.00	\$ 527,111.00	\$ 195,820.27	\$ 298,284.81	\$ 133,889.15	\$ 1,701,120.23
Profit	\$ 3,821.00	\$(122,578.00)	\$(51,487.77)	\$ 60,869.60	\$ 133,586.33	\$ 24,211.16

Advisory Committee

The Building Trades program has an advisory board made up primarily of local contractors and educators who give input concerning our curriculum, community involvement and the Construction Company. This also keeps the program in contact with the local high schools Building Trades program.

Marcus Poolaw, Graduate SBC Contractor

Mark Froelich Heating/Air Contractor

Tom Fischer Plumber/Contractor

Russ Sayler Electrician

Tony Vetter Contractor

Advisory Meetings

Meetings are held twice a year, one during the fall semester and another in the spring. Occasionally informal specials are called to discuss current issues. The main focus has been enrollment issues & constructing project homes. When meeting on these issues have helped maintain the same numbers. The program would like to target a larger number of students to be recruited. Enrollment of 12 is the targeted number of students for the program.

Program Self-Evaluation

Faculty

At the present time Building Trades has two faculty. The faculty stay current with new techniques and technologies in the field by attending construction meetings, building trades shows and green built construction seminars as they become available. They also consistently interacting with people involved in the construction industry.

Both Faculty are currently serving on the activities committee.

The Building Trades program does not use adjunct faculty. We currently teach 17 credits in both the Fall and Spring semesters during the school year.

Since TREND started 2013 the second instructor was hired and shares teaching duties in the classroom and is part of the construction company. All classroom and practicum classes are team taught using new and improved techniques for the classroom and hands-on training. Dave Luger also serves as the construction company CEO, Terry Brownotter is the construction supervisor for the summer construction season.

At current enrollment numbers the faculty is sufficient in number (2) and adequately trained to provide effective instruction in the Building Trades program. One staff member is nearing retirement so a slow transition of duties is taking place. After retirement, if enrollment numbers would increase and exceed 15 students, we would address adding another instructor.

Student Relations

Faculty in the program far exceeds the required number of office hours required to ensure that students have reasonable access to them on a daily basis. The faculty are here Monday through Friday at 8:00 am until at least 4:40 pm. An open door policy extends to evenings and weekends as well.

Courses are delivered to ensure that all students with a variety of learning styles are given the opportunity to succeed. The program's in-house student survey shows that students

feel comfortable performing tasks after completion of our course work. Course instruction is provide through lectures, lab activities for proficiency tasks and informal discussions on related topics.

Most students stay in close contact with faculty for technical advice on problems related to construction and life in general. As students are working on there practicum less formal interaction allows a variety of discussions to occur.

Curriculum Content, Design and Delivery

Building Trades program and its courses follow curriculum guidelines set forth by the Associated General Contractors of America and the National Center for Construction and Education and Research (NCCER) to prepare students for employment in the construction field. Carpenters make up the largest building trades occupation in the industry and those with these all-around skills are in high demand. Job opportunities for carpenters are expected to be excellent over the next decade nation wide, particularly in North Dakota with the oil boom and power plants in need for those with the most skills. North Dakota Job Service (2-10-12) lists a 20,000 manpower shortage in the state.

Building Trades program incorporates Native American cultures into the curriculum, by going out to the committees to help assist with building houses, renovate homes, and remodel projects for our elder here on Standing Rock. The program bases the needs and wants through communications with enrolled members and by assisting were help is needed.

Our local TERO office is active in helping our students get employment.

The Building Trades Curriculum uses the NCCER Core Curriculum (Introductory Craft Skills), Carpentry Fundamentals Level One and Carpentry Framing and Finishing Level Two as it main text books for the two year program.

FALL COURSE WORK 1ST YEAR

CARP 102 Core Curriculum
CARP 105 Construction Math
CARP 122 Construction Safety
CARP 125 Construction Practicum I

SPRING COURSE WORK 1ST YEAR

CARP 140 Principles of Interior Finish
CARP 145 Construction Practicum II

FALL COURSE WORK 2ND YEAR

CARP 120 Principles of Framing
CARP 160 Concrete Systems Technology
CARP 245 Construction Practicum III
ARCH 101 Architectural Drafting

SPRING COURSE WORK 2ND YEAR

ARCH 144 Construction Estimating
CARP 240 Advanced Interior Finishing
CARP 255 Construction Practicum IV

The Building Trades program uses the NCCER standardized exams and proficiency performance in each skill area taught to measure student comprehension. Students must score 70% or higher on exams and pass the proficiency performance to receive recognition from NCCER. All students have the opportunity to retest as many times as they choose to reach 70%. In addition to the classroom instruction, hands on instruction is given in each phase of home building as the students participates in the building of a house each year start to finish. Text books and reference materials are updated as they become available through NCCER. The program also follows guidelines used in the year ending program assessment presented to the Sitting Bull College Assessment Committee.

Institutional Support

The program was the last one to make the move from the old campus to the new Trades Center 2012. Classrooms and the teaching facilities are excellent. With the help of the construction company, tools and equipment used by the program are top line equipment used in the industry today. We also receive funds from the State Vocational and Technology department and the TREND program to supplement construction dollars for tools and equipment.

The student services seem to be adequate, though because of construction deadlines, we sometimes can not participate in school activities. The library resources, tutors, the learning lab Center and our own computer lab provide service if the student pursues the help being offered.

The college has been supportive of professional development activities for faculty member when requested. The past few years the instructors have gone to Energy – Efficiency Building seminars and work shops on Geothermal heating systems and solar assisted heating.

Importance to the College and other Programs

The program and its students and graduates are highly visible through out Standing Rock and Indian country with the addition of our construction company. The faculty work closely with the tribe in assisting the neediest of the needy with much needed home repairs and new housing. The program is called upon time and time again by the tribe and various individuals for technical assistance, building materials and help in repairs. The construction company promotes Sitting Bull College throughout the communities and are highly isolable in the community.

Successes and Highlights

The programs primary role is to provide the student with the instruction and skills required in today's fast changing world of work to succeed in the construction industry. The community can travel around Standing Rock and see hundreds of new homes that Sitting Bull College Building Trades students and graduates helped construct. Sitting Bull College Construction has built 77 homes and has done hundreds of renovations and

repairs for tribal members. Six of the programs graduates are self-employed as contractors, 59 students have worked for contractors here or off the reservation and others as maintenance workers for agencies and business. The program has two students who have gone on and become educators in the field of Building Trades. In addition the Building Trades Program is self-sufficient.

Program Planning

Trends

Building Trade's faculty look to increased enrollment to 12 students being a perfect number for instruction. Faculty would like to start going out again with the Outreach Coordinator to the local high schools, local college fairs and do recruiting about the program. With the growing opportunities in western North Dakota from the oil fields, construction workers are at an all time high with demand out pacing supply. Associated General Contractors of North Dakota in Bismarck ND have listing of jobs that are endless in all construction trades from building man camps to new housing to maintenance on the rigs. Opportunities await those who will seize the moment. The faculty look to have increased enrollment with students due to the new TREND program in Framing and Interior certificates. Program goals will remain the same as will be beneficial to students and teaching methods thru NCCER

Revised Goals and Objectives Due to Program Review

The Building Trades Program is solid and the goals and objectives will remain the same. In the future, a plumbing course and a heating & air course could be added to enhance the program. The faculty see a high demand for a plumbing and furnace work. Especially in the winter months it is hard to find a dependable plumber and furnace technician.

Additional Resources Needed

The program has no immediate concerns. Long-term needs would be additional clerical support if funds were available.